

March 1, 2005

Air Docket
Environmental Protection Agency
Mailcode 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Docket ID NO. OAR-2004-0237
Animal Feeding Operations Consent Agreement and Final Order

The Missouri Departments of Agriculture and Natural Resources and the University of Missouri Extension Commercial Agriculture Program offer these comments on the U. S. Environmental Protection Agency's "Animal Feeding Operations Consent Agreement and Final Order" (Agreement). As the state's Land Grant University and the two state agencies that are most familiar with the agricultural industry and air quality issues in Missouri, we offer a breadth of knowledge and experience that provides a strong perspective for reviewing the Agreement.

The Agreement has the potential to provide a firm scientific basis for moving forward to resolve questions related to the air emissions from animal feeding operations with careful consideration of these comments and concerns with the sampling protocol. It follows many of the recommendations of the National Academy of Science and promises to clarify for both producers and the states, the applicability of the federal Clean Air Act and other environmental laws to these livestock operations.

Our agencies have worked closely with the operators of Missouri's farms for many years and offer to confer with the Agricultural Air Research Council (NPO) and the Science Advisor as site selection proceeds. Through our interactions with the producers across the state, we have gained valuable knowledge that could aid in selection of the most appropriate and representative sites for monitoring. Given the relatively small number of farms to be monitored, the selection of representative sites is crucial to the success of this effort.

In addition, Missouri has been the site of previous monitoring under a state and federal consent judgment with Premium Standard Farms. This has provided Missouri with a good understanding of the techniques involved and the challenges of producing accurate and useful

results. Much of the knowledge gained during that monitoring study is reflected in the methodologies selected by EPA for this Agreement. Thus, we invite EPA to include the state in the planning and execution of this Agreement.

The following comments identify specific issues within the Federal Register Notice that we believe deserve additional attention.

Size of Farms to be Monitored

The Agreement does not describe the size of farms to be considered under the Agreement. Missouri encourages the NPO to select larger farms because these offer three main benefits. First, the larger farms are those most likely to be impacted by the results of this monitoring and thus should be represented in the sampling. Second, these farms are most likely to be using modern production practices and thus the results from smaller farms may not accurately reflect the actual practices on the larger farms. Finally, the larger farms offer the greatest potential for implementing newly developed emission control technologies and thus fit that criteria of the Agreement better than the smaller farms. Because of the small number of farms to be monitored, this is a major issue as one unrepresentative farm could impact a large portion of producers in such a way as to introduce a regional bias into the agricultural community.

Monitoring Study Protocols

An independent review of the monitoring study protocols is necessary to increase confidence in the scientific soundness of the study and assure the scientific quality of the data. If the monitoring study is conceived as a validation exercise, EPA should provide information on the methods it intends to use to establish emissions estimates from operations and discuss the reasoning behind its selection of the monitoring sites. The peer review process should require an explicit statement of the study objectives, allow reviewers to alter the approach used in the project and provide clear guidance to ensure that the monitoring protocol will meet the stated goals of this project. Many large research projects use peer review of the experimental design, data collection and analysis to increase credibility. This study should be no different.

Although the limited number of monitoring sites can be justified from the standpoint of avoiding unwarranted high monitoring costs, the insufficient number of monitoring sites does not allow this study to develop accurate emissions models for individual AFO's or validate existing emissions estimating models by itself.

Additional work is also needed to define the monitoring protocols. While 60-second samples for 24 months are determined for some compounds, the frequency and period of sampling are not defined in other cases. The protocol explicitly states that building monitoring will occur for a two-year period, but provides no details on the duration or frequency of manure storage sampling. This is also particularly critical for the one-day VOC sampling. While some variation in sampling protocols may be justified, all parties have a vested interest in seeing equitable standards in place. The agreement notes that some monitoring will be done by moving equipment from site to site. The need to carefully schedule this monitoring to avoid seasonal or other biasing of results is critical to the success of the agreement.

As a state that has been delegated authority under the federal Clean Air Act, Missouri's Department of Natural Resources is required to base permit decisions on the potential to emit. The exclusion of land application areas as an emission source leaves out of the monitoring protocol an emissions source that we must consider. Unless EPA has another method for estimating these emissions, significant uncertainty will remain in the total emissions from these facilities. Because emissions are expected to vary substantially as a function of application method and local weather conditions, no well-established emissions factors have been determined for this source.

The National Academy of Sciences report referenced in the Agreement recommended evaluation of some additional emission parameters with regard to animal feeding operations, beyond those included in the current agreement. These include methane, and the 188 specifically named Clean Air Act Hazardous Air Pollutants (HAP's). In order that the emissions monitoring in the agreement be comprehensive, methane and the appropriate HAP's should be included. If not, the opportunity to clarify legal requirements will not be achieved. This will limit broad acceptance of the sampling results, and create pressures for a second round of sampling in the future, which could be conducted more cost effectively as part of this sampling plan.

Additional Comments

While the Notice discusses the need for multiple sites to account for climatic variations, no mention is made of weather or seasonal variations. Previous monitoring in northern Missouri has shown that local weather conditions play a significant role in measured variations in emissions. Volatile organic compound (VOC) emissions vary significantly with temperature. Other chemical species to be monitored change, to a lesser extent, with atmospheric pressure. We encourage EPA to assure that sampling occurs over a range of conditions to assure that results provide a sound basis for calculating emissions.

Terms such as "timely" and "promptly" are used throughout the Agreement. These terms should be replaced with more precise terms to provide clarity to producers and other interested parties.

EPA should consider using this opportunity to test alternative emissions monitoring technologies and to confirm the validity of the methods being used. With modest additional costs, EPA and the AFO operators could build trust in the results determined under this agreement and provide a basis for future work should any uncertainties remain at the end of monitoring. This is particularly crucial given the small number of farms to be monitored and the great diversity of climatic conditions and operational variables across the country. For example, a dynamic flux chamber method could be used on both manure piles and lagoons to augment the open path sampling. Chemiluminescent analyzers have a lower detection threshold than photoacoustic infrared analyzers and could be used to confirm low emissions levels that would otherwise be listed as non-detectable.

Section 28 indicates that operators of any farm that confines ten times the "large CAFO" threshold of an animal species must notify the National Response Center within 120 days of

receiving an executed copy of their Agreement and indicate their potential to emit ammonia. There is no explanation offered for this requirement. If an operation of that size has submitted an Agreement, that should serve as notice of their intent to comply with all applicable regulations once emissions estimates are determined at the conclusion of the study.

Section 34D requires any waste-to-energy system to operate for two years or until emissions estimating methodologies have been completed. EPA needs to consider a scenario in which no methodology is determined for a particular farm type (see section 32). We suggest that EPA expressly note the non-applicability of section 34D in the case that an applicable methodology can not be determined.

Section 48A indicates that, "If a Respondent has only one Farm...below the 'large CAFO' threshold..., Respondent is assessed a penalty of \$200." Later, Section 48B indicates that, "All other Respondents are assessed a penalty of \$500 per Farm..." This implies that a producer with two non-adjacent farms would be assessed a penalty of \$1000 (\$500 per farm) even if the combination of animal numbers on the two farms is below the "large CAFO" threshold. This section of the penalty assessment should be altered. The current penalty assessment formulation could deter "family farm" producers with multiple farms from participating in the agreement.

Section 57 penalizes the producer for a failure of the Independent Monitoring Contractor (IMC) by nullifying most of the provisions of the Agreement. However, the producer does not select the IMC and should not be punished for the failure of an IMC. EPA should rewrite this section to provide alternatives to the producer. With the small number of farms to be sampled and the need for representative results, EPA should have an alternative plan for completing the necessary work in order to form the best basis for decision-making.

EPA's use of the term "penalty" in the Final Order appears to be standard language, but may have unintended effects on producers and their participation in this Agreement. Operations that currently have litigation pending against them for violations related to federal environmental laws are excluded from participation in the Agreement. However, it is understood that this concept is necessary to establish legal protections offered through this Agreement. Therefore we recommend that EPA consider a term such as "settlement charge" or other less pejorative term than "penalty", if possible. This is less likely to cause producers to reject the Agreement or be penalized by lending institutions for their participation.

The State of Missouri appreciates the opportunity to comment on this agreement and hopes to work closely with EPA and the producers, as appropriate, in its implementation. Should you have any questions about these comments or require additional information, please contact Joe Engeln, Assistant Director for Science and Technology, Missouri Department of Natural Resources (573) 751-9813 or joe.engeln@dnr.mo.gov.

Sincerely,

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